

ABSTRACT OF THE DISCLOSURE

Embodiments of the invention provide a parcel-based, data-mapping scheme that allow for implementation of data integrity methods and variable size logical data blocks while the layout of the physical storage device remains unchanged. For one embodiment, the invention provides a method in which a virtual data storage parcel including a number of extended-size logical data storage blocks is created, and one or more physical data storage parcels, each including a number of standard-size logical data storage blocks, is created. The combined size of the one or more physical data storage parcels equals or exceeds the size of the virtual data storage parcel. The extended-size logical data storage blocks of the virtual data storage parcel are mapped to the standard-size logical data storage blocks of the one or more physical data storage parcels.